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THE DISTRIBUTION OF ROTIFERA ON MOUNT DESERT ISLAND

BY FRANK J. MYERS

The following list of Rotifera is based on collections made during the summer months of 1922 to 1931 inclusive.

Mount Desert Island is situated on the coast of Maine and is the largest of a group of many islands east of Penobscot Bay. The most conspicuous and dominant rock, and the one that makes up the greatest mass, is granite. The highland consists of a ridge of mountains trending nearly east and west, sloping gradually on the north and abruptly on the south side. They are the only mountains fronting the Atlantic coast of the United States. The ridge is divided into peaks by nine transverse, parallel valleys that have been cut out by erosion and glaciation. In these valleys are situated a series of beautiful mountain lakes, from the waters of which most of the species of Rotifera listed herein were collected.

On account of the geological formation of Mount Desert Island, the various bodies of permanent water are poor in mineral salts, especially calcium carbonate. Needham and Lloyd (1), mention that waters rich in calcium salts maintain, as a rule, a more abundant life than do other waters. As pointed out by Harring and Myers (2), bodies of alkaline (hard) water generally contain an immense number of individual rotifers represented by relatively few species, while permanent bodies of acid (soft) water contain relatively few individuals representing many species.

The hydrogen ion concentration of all bodies of permanent water examined was below 7.0, except in the middle of the larger lakes where it ascended to 7.4 . In the littoral region of these lakes, the hydrogen ion concentration varied between 6.4 and 6.8. In view of these facts, the rotatorian fauna of Mount Desert Island should be an acid fauna.

The impression that microscopic animals are essentially cosmopolitan and that their distribution is not a problem is no longer borne out by the facts, that is, so far as the Rotifera are concerned. The problem of distribution depends on the conditions of existence rather than on the means of distribution. That the rotifers enjoy a world-wide distribu-

tion, on account of the evident age of the group and the ease of transportation of the eggs of duration, is not to be gainsaid. That it is not possible to speak of any typical rotatorian fauna for any continent or zone, as was claimed by Rousselet (3), is not borne out by the results of recent investigations.

Only the order Ploima has been used here, for group index purposes, on account of the facility in collecting them, the more numerous habitats, and greater flexibility of the group as a whole.

The fresh-water ploimate rotifers may be roughly divided into three ecological groups.

Group 1. The Alkaline Fauna, containing all Rotifera tolerant of alkaline conditions and living in water having a p_H value of 7.0 and above.

Group 2. The Acid Fauna, containing all Rotifera tolerant of acid conditions and living in water having a p_H value of below 7.0.

Group 3. The Transcursion Fauna, containing all Rotifera that are tolerant of both alkaline and acid conditions.

While no sharp line of demarkation can be drawn between the acid fauna and the alkaline fauna, occasions where acid-water rotifers are found in slightly alkaline water and alkaline rotifers are found in slightly acid water are exceptions rather than the rule. So reliable is the distinction between these faunas that a glance at a collection from a given location will indicate its origin at once. Therefore, we can safely say that acid-water rotifers largely predominate in soft-water associations, and alkaline-water rotifers largely predominate in hard-water associations, with numerous transcursion rotifers in both associations.

In order to facilitate reference, locations yielding collections are numbered and the location number added after the record of each species, except where such species occurred in more than six locations, when it may be considered as being evenly distributed throughout the Island, and, in such cases the numbers after the records are omitted.

NAMES OF LOCATIONS

1.—The Barcelona, a meandering tide-plain stream on the north side of the Island. Average p_H value 6.0 to 6.4.

2.—Lake Wood, a small mountain lake on the north slope of the Island; elevation, 200 feet. Average p_H value 6.4 to 6.6.

3.—Lower Breakneck, a widespread of Duck Brook, formed by a beaver dam. Average p_H value 6.4 to 6.8.

4.—Eagle Lake, a mountain lake near the center of the Island; elevation, 275 feet. Average p_H value 6.6 to 7.2 in the middle.

5.—Somes Pond, a small lake formed by damming the outlet of Long Pond. Average p_H value 6.4.

6.—Pond Heath, sphagnum pools in marsh in the north side of the Island. Average p_H value 6.2.

7.—Bubble Pond, a mountain lake in erosion valley, between Cadillac and Pemetic Mountains; elevation, 325 feet. Average p_H value 6.6.

8.—The Tarn, a widespread formed by damming Duck Brook; situated in erosion valley between Champlain and Flying Squadron Mountains. Average p_H value 6.6 to 6.8.

9.—Aunt Bettie Pond, a decadent body of water in low land; on the northern slope of the Island. Average p_H value 6.2.

10.—Long Lake, the largest body of fresh water on the Island; bounded by Beech Mountain on the east and Western Mountain on the west. The northern third of the lake lies on the low northern slope; elevation, 58 feet. Average p_H value 6.6; 6.8; 7.0 in the middle.

11.—Echo Lake, a glacial lake in erosion valley lying between Beech Hill and Acadia Mountain; elevation, 90 feet. Average p_H value 6.4.

12.—Witch Hole, a small pond on the northeastern part of the Island; it is rapidly disappearing by plant encroachment; elevation, 340 feet. Average p_H value 6.2 to 6.6.

13.—Salisbury Cove, on north shore of the Island, marine. Average p_H value above 8.0.

14.—Half Moon Pond, a small decadent pond in the hills of the northeastern part of the Island. Average p_H value 6.6 to 6.8.

15.—Duck Brook, a mountain stream running from Eagle Lake to its outlet in Frenchmans Bay. Average p_H value 6.4.

16.—Upper Hadlock Lake, a small lake lying in erosion valley, on southern slope of the Island between Penobscot and Norumberg Mountains. Average p_H value 6.6 to 6.8.

17.—Spring-fed pool on hill in the town of Salisbury Cove. Average p_H value?

18.—Faun Pond, a small body of water in hills, on northeastern slope of the Island. Average p_H value 6.2 to 6.6.

19.—The Bowl, a pond near the top of a six-hundred foot elevation known as The Beehive, situated on the eastern shore of the Island. Average p_H value?

20.—Round Pond, a pond on the flats of the northern slope; emptying into Long Lake by a short connection. (Sometimes called Dark Pond.) Average p_H value 6.4.

21.—Northeastern arm of Long Lake, a shallow bay. Average p_H value 6.6.

22.—Ripple Pond, a widespread of stream connecting Long Lake with Somes Pond; formed by the site of an ancient dam. Average p_H value 6.4.

23.—Northeast Branch, a meandering tide-level stream emptying into Thomas Bay, on northern shore. Average p_H values 6.0 to salt water above 8.0.

24.—Toad Hole, a small round bay at the outlet of Long Lake. Average p_H value 6.6. to 6.8.

25.—Jordan Pond, a mountain lake, in erosion valley, between Pemetic and Jordan Mountains. Average p_H value 6.6.

26.—Ice Ponds, old artificial ponds near town of Manset. Average p_H value 6.2 to 6.8.

27.—Jordan Mountain Pond, a small body of water between summits of Penobscot and Sargent Mountains; elevation about 1000 feet. Average p_H value 6.4.

28.—Pond in town of Mount Desert. Average p_H value 6.6.
29.—Pond in marsh behind sea wall, on southern shore. Average p_H value 7.8.
30.—Frenchmans Bay, marine.

Faunal List

The following is a list of described species only. There are numerous species, new to science, to be described in later publications.

Abbreviations: *Ac.* = acid; *Ak.* = alkaline; *Tr.* = transcursion.

Group abbreviations are omitted in cases where the individuals do not belong to the order Ploima.

Adineta gracilis Janson.
Adineta vaga (Davis).
Albertia intrusor Gosse, 4, *Tr.*
Ascomorpha eucadis Perty, *Tr.*
Ascomorpha hyalina (Kellicott), 12, *Tr.*
Ascomorpha saltans Bartsch, *Tr.*
Ascomorpha volvocicola (Plate), 12, 21, *Ak.*
Aspelta aper (Harring), *Tr.*
Aspelta beltista Harring and Myers, *Ac.*
Aspelta circinator (Gosse), *Tr.*
Aspelta cyldona Harring and Myers, marine.
Aspelta labri Harring and Myers, 10, *Ac.*
Aspelta macra Harring and Myers, 12, *Ac.*
Asplanchna herrickii de Guerne, 2, 12, *Tr.*
Asplanchna priodonta Gosse, 4, 10, 20, *Ak.*
Asplanchnopus hyalinus Harring, 7, 8, *Tr.*
Asplanchnopus multiceps (Schrank), 8, 15, *Ak.*
Beauchampia crucigera (Doutrochet), 12, 18.
Birgea enantia Harring and Myers, *Ac.*
Brachionus capsuliflorus Pallas, 8, *Ak.*
Brachionus patulus Müller, 9, *Ak.*
Brachionus plicatilis Müller, 9, *Ak.*
Brachionus polycanthus Ehrenberg, 1, 24, *Tr.*
Cephalodella apocolea Myers, *Ac.*
Cephalodella auriculata (Müller), *Tr.*
Cephalodella collactea Myers, 12, *Ac.*
Cephalodella compressa Myers, 12, 24, *Ac.*
Cephalodella crassipes (Lord), 15, *Ak.*
Cephalodella cuneata Myers, 23, *Ac.*
Cephalodella elegans Myers, 1, 12, *Ac.*
Cephalodella elongata Myers, *Ac.*
Cephalodella eva (Gosse), *Tr.*
Cephalodella exigua (Gosse), *Tr.*
Cephalodella forficata (Ehrenberg), *Tr.*
Cephalodella forficula (Ehrenberg), *Tr.*
Cephalodella galbina Myers, 23, *Ac.*

Cephalodella gibba (Ehrenberg), *Tr.*
Cephalodella gracilis (Ehrenberg), *Tr.*
Cephalodella hiulka Myers, 12, *Ac.*
Cephalodella hoodii (Gosse), 1, *Ak.*
Cephalodella hyalina Myers, 8, 12, *Ac.*
Cephalodella innesi Myers, 3, 4, *Ac.*
Cephalodella inquillina Myers, *Ac.*
Cephalodella intuta Myers, 1, 12, 24, *Ac.*
Cephalodella magalocephalia (Glasscott), *Tr.*
Cephalodella mucronata Myers, 9, 12, 14, 20, *Ac.*
Cephalodella nana Myers, 2, 24, *Ac.*
Cephalodella nelitis Myers, 12, 23, *Ac.*
Cephalodella physalis Myers, 1, 12, 20, *Ac.*
Cephalodella plicata Myers, 12, 14, 24, *Ac.*
Cephalodella sterea (Gosse), 1, *Ak.*
Cephalodella stirgosa Myers, 7, 12, *Ac.*
Cephalodella strepta Myers, 12, 15, *Ac.*
Cephalodella tantilla Myers, *Tr.*
Cephalodella tenuior (Gosse), *Tr.*
Cephalodella ventripes (Dixon-Nuttall), 1, 4, *Ak.*
Chromogaster ovalis (Bergendal), *Tr.*
Collotheca ambigua (Hudson), 21.
Collotheca atrochoides (Wierzjeski), 12.
Collotheca campanulata (Dobie).
Collotheca conklini (Montgomery), 4.
Collotheca cornuta (Dobie).
Collotheca edentata (Collins), 6.
Collotheca heptabrachiata (Schock), 3.
Collotheca hoodii (Hudson), 12.
Collotheca mutabilis (Hudson), 12, 20, 25.
Collotheca tenuilobata (Anderson), 18.
Collotheca triolobata (Collins), 25, 27.
Colurella adriatica Ehrenberg, 24, *Tr.*
Colurella ambleytela (Gosse), 13, marine.
Colurella bicuspidata (Ehrenberg), *Tr.*
Colurella obtusa (Gosse), *Tr.*
Colurella sulcata (Stenroos), 18, *Tr.*
Colurella tesselata (Glasscott), 2, 18, *Tr.*
Conochilus hippocrepis (Schrank), *Tr.*
Conochilus unicornis Rousselet, 4, 23, 25, *Ak.*
Conochiloides dossuarius (Hudson), 29, *Ak.*
Conochiloides natans (Seligo), 12, *Ak.*
Cupelopagis vorax (Leidy), 12, 23, 25, *Tr.*
Cyrtonia tuba (Ehrenberg), 12, 24, *Tr.*
Dapidia calpidia Myers, *Ac.*
Dicranophorus alcimus Harring and Myers, *Ac.*
Dicranophorus artamus Harring and Myers, *Ac.*
Dicranophorus aspondus Harring and Myers, 2, *Ac.*

Dicranophorus biastis Harring and Myers, 12, *Ac.*
Dicranophorus capucinus Harring and Myers, *Ac.*
Dicranophorus colastes Harring and Myers, *Ac.*
Dicranophorus corystis Harring and Myers, *Tr.*
Dicranophorus edestes Harring and Myers, 1, 10, *Tr.*
Dicranophorus epicharis Harring and Myers, 12, 20, *Tr.*
Dicranophorus forcipatus (Müller), 1, *Ak.*
Dicranophorus grippus Harring and Myers, 12, 21, *Ac.*
Dircanophorus isothes Harring and Myers, *Ac.*
Dicranophorus lütkeni (Bergendal), *Tr.*
Dicranophorus pennatus Harring and Myers, 24, *Ac.*
Dicranophorus ponerus Harring and Myers, 3, *Tr.*
Dicranophorus proclastes Harring and Myers, *Ac.*
Dicranophorus robustus Harring and Myers, *Tr.*
Dicranophorus semnus Harring and Myers, 3, *Ac.*
Dicranophorus tegillus Harring and Myers, *Ac.*
Dicranophorus uncinatus (Milne), 2, *Ac.*
Dipleuchlanis propatula (Gosse), 2, 3, *Ak.*
Dissotrocha aculeata (Ehrenberg).
Dissotrocha macrostyla (Ehrenberg).
Diurella brachyura (Gosse), *Tr.*
Diurella cavia (Gosse), *Tr.*
Diurella collaris (Rousselet), *Tr.*
Diurella insignis Herrick, *Tr.*
Diurella porcellus (Gosse), *Tr.*
Diurella rousseleti (Voight), 12, *Tr.*
Diurella stylata Eyferth, *Tr.*
Diurella sulcata (Jennings), 1, 8, 19, *Tr.*
Diurella tigris (Müller), *Tr.*
Diurella weberi Jennings, 12, 24, *Ak.*
Dorystoma caudata (Bilfinger), 1, 12, *Tr.*
Embata laticeps (Murray).
Embata laticornis (Murray).
Encentrum eristes Harring and Myers, 13, marine.
Encentrum felis (Müller), *Tr.*
Encentrum lacidum Harring and Myers, 13, marine.
Encentrum marinum (Dujardin), 13, marine.
Encentrum nesites Harring and Myers, 13, marine.
Encentrum otois Harring and Myers, 20, *Ac.*
Encentrum ricciæ Harring, 1, 18, 25, *Tr.*
Encentrum zetetum Harring and Myers, 15, *Ac.*
Eothina argus Harring and Myers, 12, *Ac.*
Eothina elongata (Ehrenberg), *Tr.*
Erignatha belodon Harring and Myers, 3, 9, *Ac.*
Erignatha capula Harring and Myers, 3, *Ac.*,
Erignatha clastopis (Gosse), *Tr.*
Erignatha tryphæa Harring and Myers, *Ac.*
Euchlanis alata Voronkov, *Tr.*

Euchlanis callysta Myers, 1, 10, 12, *Ac.*
Euchlanis dilatata Ehrenberg, *Tr.*
Euchlanis meneta Myers, *Tr.*
Euchlanis parva Rousselet, *Tr.*
Euchlanis pellucida Harring, *Ac.*
Euchlanis phryne Myers, 24, *Ac.*
Euchlanis triquetra Ehrenberg, *Tr.*
Filina longiseta (Ehrenberg), 4, *Ak.*
Floscularia conifera (Hudson).
Floscularia janus (Hudson).
Floscularia melicerta (Ehrenberg), 12.
Floscularia ringens (Linnæus).
Gastropus minor (Rousselet), *Tr.*
Gastropus orbicularis (Kellicott), 12, *Ak.*
Gastropus stylifer Imhof, 12, 26, *Ak.*
Habrothrocha angusticollis (Murray).
Habrotrocha collaris (Ehrenberg).
Habrotrocha constricta (Dujardin).
Habrotrocha eremita (Bryce).
Habrotrocha lata (Bryce).
Habrotrocha munda (Bryce).
Harringia rousseleti de Beauchamp, *Tr.*
Itura aurita (Ehrenberg), 12, *Ak.*
Keratella paludosa (Lucks), 8, *Ak.*
Keratella quadrata (Müller), *Tr.*
Keratella serrulata (Ehrenberg), *Tr.*
Lecane acronycha Harring and Myers, *Ac.*
Lecane agilis (Bryce), 14, 20, *Tr.*
Lecane aquila Harring and Myers, 12, *Ac.*
Lecane arcula Harring, 12, *Tr.*
Lecane brachydactyla (Stenroos), *Ac.*
Lecane clara (Bryce), *Tr.*
Lecane crepida Harring, 24, *Tr.*
Lecane depressa (Bryce), 12, *Tr.*
Lecane flexilis (Gosse), *Tr.*
Lecane grandis (Murray), 13, 30, marine.
Lecane haliclysta Harring and Myers, 12, *Ac.*
Lecane intrasinuata (Olofsson), *Ac.*
Lecane jessupi Harring, *Ac.*
Lecane lauterborni Hauer, 8, 12, 20, *Ac.*
Lecane leontina (Turner), *Tr.*
Lecane ligona (Dunlop), 12, 15, *Ac.*
Lecane ludwigii (Eckstein), *Ak.*
Lecane luna (Müller), *Tr.*
Lecane mira (Murray), *Ac.*
Lecane nana (Murray), 12, *Tr.*
Lecane noithis Harring and Myers, 26, *Ac.*
Lecane ohioensis (Herrick), 8, 12, *Ak.*

Lecane pelatis Harring and Myers, 12, 18, *Ac.*
Lecane pertica Harring and Myers, 12, *Ac.*
Lecane ploenensis (Voight), 3, *Tr.*
Lecane pycina Harring and Myers, 7, *Ac.*
Lecane pyrrha Harring and Myers, 2, *Ac.*
Lecane rhacois Harring and Myers, *Tr.*
Lecane rhytida Harring and Myers, 9, *Ac.*
Lecane saginata Harring and Myers, 3, 12, *Ac.*
Lecane sagula Harring and Myers, 12, *Tr.*
Lecane satyrus Harring and Myers, *Ac.*
Lecane signifera (Jennings), 12, 25, *Tr.*
Lecane stichæa Harring, *Tr.*
Lecane stokesii (Pell), 1, 12, 20, *Ak.*
Lecane tabida Harring and Myers, 8, *Tr.*
Lecane tenuiseta Harring, *Tr.*
Lecane tryphema Harring and Myers, 9, *Ac.*
Lecane ungulata (Gosse), *Tr.*
Lepadella acuminata (Ehrenberg), 1, 12, *Tr.*
Lepadella benjamini Harring, 2, *Ak.*
Lepadella cristata (Rousselet), *Tr.*
Lepadella latusinus (Hilgendorf), 1, *Tr.*
Lepadella ovalis (Müller), *Tr.*
Lepadella patella (Müller), *Tr.*
Lepadella quinquecostata (Lucks), *Tr.*
Lepadella rhomboides (Gosse), 4, 8, *Ak.*
Lepadella rhomboidula (Bryce), 12, *Ac.*
Lepadella triptera Ehrenberg, *Tr.*
Limnias ceratophylli Schrank.
Limnias myriophylli (Tatem).
Lindia annecta Harring and Myers, 4, *Ac.*
Lindia fulva Harring and Myers, *Ac.*
Lindia pallida Harring and Myers, *Tr.*
Lindia truncata (Jennings) 12, 20, *Tr.*
Macrochaetus collinsii (Gosse), *Tr.*
Macrochaetus subquadtatus Perty, 12, *Tr.*
Macrotrachela crucicornis (Murray).
Macrotrachela cuthberti Milne.
Macrotrachela ehrenbergi (Janson).
Macrotrachela habita (Bryce).
Macrotrachela multispinosa zickendrahti (Richters).
Macrotrachela musculosa Milne.
Macrotrachela nana (Bryce).
Macrotrachela plicata (Bryce).
Macrotrachela quadracornifera Milne.
Microcodon clavus Ehrenberg, *Tr.*
Mikrocodides chlæna (Gosse), 1, 3, 4, *Tr.*
Mniobia symbiotica (Zelinka).
Monommata appendiculata Stenroos, *Ac.*

Monommata astia Myers, 12, 20, *Tr.*
Monommata caudata Myers, 9, *Ac.*
Monommata cæca Myers, 19, *Ac.*
Monommata diaphora Myers, 19, *Ac.*
Monommata enedra Myers, 9, 12, *Ac.*
Monommata grandis Tessin, *Tr.*
Monommata hyalina Myers, 12, 20, *Ac.*
Monommata longiseta (Müller), *Tr.*
Monommata maculata (Harring and Myers), *Tr.*
Monostyla acus Harring, 2, *Ak.*
Monostyla bifurca Bryce, 3, 20, *Tr.*
Monostyla bulla Gosse, *Tr.*
Monostyla closterocerca Schmarda, *Tr.*
Monostyla crenata Harring, *Tr.*
Monostyla elachis Harring and Myers, *Tr.*
Monostyla furcata Murray, 3, *Tr.*
Monostyla hamata Stokes, *Tr.*
Monostyla lunaris (Ehrenberg), *Tr.*
Monostyla monostyla (Daday), 12, *Ak.*
Monostyla pygmæa Daday, *Tr.*
Monostyla quadradentata Ehrenberg, *Ak.*
Monostyla rhopalura Harring and Myers, *Tr.*
Monostyla styrax Harring and Myers, *Tr.*
Monostyla tethis Harring and Myers, 9, *Ac.*
Monostyla vastita Harring and Myers, 20, *Ac.*
Mytilina ventralis Ehrenberg, 2, 28, *Ak.*
Notholca bostoniensis Rousselet, 12, 14, *Tr.*
Notholca longispina (Kellicott), 21, *Ak.*
Notholca striata (Müller), 23, *Ak.*
Notommata cerberus (Gosse), *Tr.*
Notommata codonella Harring and Myers, 14, 20, *Ac.*
Notommata contorta (Stokes), *Tr.*
Notommata copeus Ehrenberg, *Tr.*
Notommata cyrtopus Gosse, *Tr.*
Notommata doneta Harring and Myers, 3, 12, 24, *Ac.*
Notommata falcinella Harring and Myers, 7, 8, *Ak.*
Notommata lenis Harring, 1, 12, *Tr.*
Notommata pachyura (Gosse), *Tr.*
Notommata pachuyra triangularis (Kirkman), 12, *Tr.*
Notommata peridia Harring and Myers, *Ac.*
Notommata pseudocerberus de Beauchamp, *Tr.*
Notommata pygmæa Harring and Myers, 10, 12, *Ac.*
Notommata telmate Harring and Myers, 4, 8, 24, *Ac.*
Notommata tithasa Harring and Myers, 1, 12, *Ac.*
Notommata thopica Harring and Myers, *Ac.*
Notommata saccigera Ehrenberg, *Ac.*
Notommata silpha (Gosse), 3, 12, 24, *Tr.*
Octotrocha speciosa Thorpe.

Philodina acuticornis Murray.
Philodina citrina Ehrenberg.
Philodina megalotrocha Ehrenberg.
Philodina plena (Bryce).
Platyias quadracornis (Ehrenberg), 1, *Ak.*
Pleurotrocha petromyzon Ehrenberg, *Tr.*
Pleurotrocha robusta (Glasscott), *Ac.*
Plœsoma lenticulare (Herrick), *Tr.*
Plœsoma triacanthum (Bergendal), 4, 8, *Tr.*
Plœsoma truncatum (Levander), 2, 12, *Tr.*
Polyarthra euryptera Wierzeski, 2, *Tr.*
Polyarthra trigla Ehrenberg, *Tr.*
Proales brevipes Harring and Myers, 3, *Tr.*
Proales decipiens (Ehrenberg), *Tr.*
Proales doliaris (Rousselet), 12, 20, 24, 26, *Ac.*
Proales neapolitana (Daday), 13, marine.
Proales parasita (Ehrenberg), 21, *Ak.*
Proales reinhardti (Ehrenberg), 13, marine.
Proales similis de Beauchamp, 13, marine.
Proales sordida Gosse, *Tr.*
Proalinopsis caudatus (Collins), *Tr.*
Proalinopsis staurus Harring and Myers, 1, 12, *Ac.*
Pseudoecistes rotifer Stenroos, *Tr.*
Resticula anceps Harring and Myers, 24, *Ac.*
Resticula melandocus (Gosse), *Tr.*
Resticula nyssa Harring and Myers, 12, *Ac.*
Rotaria elongata (Weber).
Rotaria macroceros (Gosse).
Rotaria macrura Ehrenberg.
Rotaria mento (Anderson).
Rotaria ovata (Anderson).
Rotaria rotatoria (Pallas).
Rotaria sordida (Western).
Rotaria spicata (Murray).
Rotaria tardigrada (Ehrenberg).
Rousseletia corniculata Harring, *Tr.*
Scaridium eudactylotum Gosse, 22, *Ak.*
Scaridium longicaudum (Müller), *Tr.*
Squatinella leydigii (Zachrias), 12, 24, *Ac.*
Squatinella longispinata (Tatem), *Tr.*
Squatinella mutica (Ehrenberg), *Tr.*
Squatinella tenella (Byrce), 12, 24, *Tr.*
Squatinella tridentata (Fresenius), *Tr.*
Stephanoceros fimbriatus (Goldfuss).
Streptognatha lepta Harring and Myers, 12, 22, 20, 24, *Ac.*
Synchæta baltica Ehrenberg, 13, marine.
Synchæta johanseni Harring, 30, marine.
Synchæta oblonga Ehrenberg, 4, 6, 12, *Tr.*

Synchæta pectinata Ehrenberg, *Tr.*
Synchæta stylata Wierzejski, 4, 6, *Ak.*
Synchæta tremula (Müller), 12, *Tr.*
Taprocampa annulosa Gosse, *Tr.*
Taprocampa selenura Gosse, 8, 12, *Tr.*
Testudinella incisa (Ternetz), *Tr.*
Testudinella parva (Ternetz), *Tr.*
Testudinella parva bidentata (Ternetz), *Tr.*
Testudinella patina (Hermann), 10, 29, *Ak.*
Tetrasiphon hydrocora Ehrenberg, 3, 9, 12, *Ac.*
Trichocerca bicristata (Gosse), *Tr.*
Trichocerca bicuspes (Pell), 12, 28, *Ak.*
Trichocerca capucina (Wierzejski and Zachrias), 12, 28, *Ak.*
Trichocerca carinata (Ehrenberg), 1, 12, *Ak.*
Trichocerca curvata (Levander), 30, marine.
Trichocerca cylindrica (Imhof), 1, 12, *Ak.*
Trichocerca elongata (Gosse), 8, *Tr.*
Trichocerca flava (Voronkov), 1, 12, 19, 24, *Tr.*
Trichocerca iernis (Gosse), 2, 12, *Tr.*
Trichocerca lata (Jennings), *Tr.*
Trichocerca longiseta (Schrank), *Tr.*
Trichocerca marina (Daday), 13, marine.
Trichocerca mucosa (Stokes), 4, *Tr.*
Trichocerca multicrinis (Kellicott), 8, 21, 26, *Ak.*
Trichocerca pusilla (Jennings), 6, 7, 20, 24, *Tr.*
Trichocerca scipio (Gosse), *Tr.*
Trichotria similis (Stenroos), *Tr.*
Trichotria tatractis (Ehrenberg), *Tr.*
Tylotrocha monopus (Jennings), *Tr.*

Rotifers of the orders Floscullariacea, Collothecacea, and Bdelloida were not especially searched for. Individuals were recorded, however, when observed, in order to make the faunal list as complete as possible. Counting the species of the above orders, and also the undescribed species considered to be valid, we have a total of four hundred and forty-nine. This is a large number for an island of only one hundred and five miles in area.

Collections made over a period of time in the lakes of the Yahara basin, Wisconsin, gave forty-seven alkaline Ploima and ninety-one transcursion species; the acid-water rotifers were missing, not one individual being recorded.

Such typical alkaline-water genera, as *Asplanchna, Brachionus, Filina, Mytilina, Lacinularia,* and *Sinantherina* were nearly or entirely absent in the Mount Desert collections, while they were abundant in the collections from the lakes of the Yahara basin.

The faunal list from Mount Desert Island agrees with those of Atlantic County and the Pine Barrens, New Jersey, expanses composed of deep silicious deposit surrounded by alkaline areas. It also agrees with that of Vilias County, Wisconsin, a large area composed of deep glacial drift.

In view of these facts, the rotifer fauna of Mount Desert Island may be considered as an acid fauna, correlated to the hydrogen ion concentration of the various bodies of water as indicated by their p_H values.

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